

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application. Cancelled claims are cancelled without prejudice.

1. (Currently amended) A magnetizable composition comprising an admixture of thermoplastic polymer, elastomeric polymer, and magnetizable powder; wherein
 - (a) the weight ratio of elastomeric polymer:thermoplastic polymer is from about 1:10 to about 3:1[[.]];
 - (b) said thermoplastic polymer provides a first phase in said composition;
 - (c) said elastomeric polymer provides a second phase in said composition; and
 - (d) said magnetizable powder is dispersed in said first phase and in said second phase.
2. (Cancelled)
3. (Original) A composition according to Claim 1, wherein said elastomeric polymer is fully cured.
4. (Original) A composition according to Claim 1, wherein said elastomeric polymer is partially cured.
5. (Original) A magnetizable thermoplastic elastomer composition according to Claim 1 wherein said thermoplastic polymer is thermoplastic elastomer and said elastomeric polymer is thermoset elastomer.

6. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the thermoset elastomer is an elastomer that has not been subjected to vulcanization.

7. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the thermoset elastomer is selected from the group consisting of ethylene acrylic elastomers, acrylate elastomers, cross-linking monomer elastomers, and mixtures thereof.

8. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the thermoplastic elastomer is from about 5% to about 50% (by weight) of the composition.

9. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the thermoset elastomer is from about 3% to about 40% (by weight) of the composition.

10. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the magnetizable powder is from about 1% to about 90% (by weight) of the composition.

11. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the magnetizable powder is selected from the group consisting of strontium ferrite oxide, barium ferrite oxide, ferrite alloys containing aluminum and nickel and cobalt, rare-earth ferrites, and mixtures thereof.

12. (Original) A magnetizable thermoplastic elastomer composition according to Claim 5 wherein the thermoplastic elastomer is thermoplastic polyester elastomer.

13. (Cancelled)

14. (Previously presented) A magnetizable thermoplastic elastomer composition according to Claim 9, wherein said thermoset elastomer comprises cured elastomer that is fully cured.

15. (Previously presented) A magnetizable thermoplastic elastomer composition according to Claim 9, wherein the thermoset elastomer comprises cured elastomer that is partially cured.

16 – 34. (Cancelled)

35. (Currently amended) A magnetizable composition comprising:

- (a) a first phase comprising a thermoplastic polymeric material;
- (b) a second phase comprising dynamically vulcanized cured elastomeric polymeric material; and
- (c) magnetizable powder dispersed in said first phase and in said second phase;
- (d) wherein the elastomeric polymer is present at a level of from about 25% to 75% of the thermoplastic material.

36. (Original) A composition according to Claim 35, wherein said elastomeric polymeric material is fully cured.

37. (Original) A composition according to Claim 35, wherein said elastomeric polymeric material is partially cured.

38. (Original) A composition according to Claim 35, wherein said thermoplastic polymeric material comprises polyester thermoplastic elastomer.

39. (Original) A composition according to Claim 35, wherein said elastomeric polymeric material is selected from the group consisting of acrylic elastomers, ethylene acrylic elastomers, and mixtures thereof.

40. (Original) A composition according to Claim 35, wherein said thermoplastic polymeric material comprises polyester thermoplastic elastomer; said elastomeric polymeric material comprises a material selected from the group consisting of acrylic elastomers, ethylene acrylic elastomers, and mixtures thereof; and said hard magnetic material comprises from about 10% to about 90% (by volume) of said composition.

41. (Previously presented) A composition according to Claim 40, wherein said hard magnetic material comprises from about 10% to about 90% (by weight) of said composition.

42. (Cancelled)

43. (Original) A composition according to Claim 40, wherein said elastomeric polymeric material is present at a level of from about 10% to about 100% (by weight) of said thermoplastic material.

44. (Previously presented) A composition according to Claim 40, wherein said elastomeric polymeric material is present at a level of from about 50% to about 75% (by weight) of said thermoplastic material.

45. (Previously presented) A shaped article comprising a magnetizable composition according to Claim 35.

46 – 64. (Cancelled)

65. (Currently amended) A process for making a magnetizable polymer composition comprising:

(a) dispersing hard magnetic material in a blend of a thermoplastic material and elastomeric material, wherein said elastomeric material is in an uncured state or a partially cured state; and

(b) curing dynamically vulcanizing said elastomeric material in the presence of said thermoplastic material and said hard magnetic material ;

(c) wherein the weight ratio of the elastomeric material:thermoplastic material is from about 1:10 to about 3:1 in the blend.

66. (Currently amended) A process according to Claim 65, wherein said dispersing further comprises:

(1) combining thermoplastic polymeric material, uncured elastomeric polymeric material, and particles of hard magnetic material to form a combination, wherein said hard magnetic material comprises from about 10 percent to about 90 percent by volume of said combination; and

(2) applying mechanical energy to said combination to form said blend;

(3) wherein said curing dynamically vulcanizing further comprises continuing to apply mechanical energy during said curing-dynamically vulcanizing.

67. (Cancelled)

68. (Original) A process according to Claim 65, carried out in a twin-screw extrusion apparatus.

69. (Cancelled)

70. (Previously presented) A process according to Claim 65, wherein said thermoplastic

material comprises thermoplastic elastomer.

71. (Previously presented) A process according to Claim 65, wherein said elastomeric material is selected from the group consisting of acrylic elastomers, ethylene acrylic elastomers, and mixtures thereof.

72. (Original) A process according to Claim 70, wherein said composition comprises from about 10 to about 100 parts of said elastomeric material per 100 parts of thermoplastic material.

73. (Original) A process according to Claim 71, wherein said composition comprises from about 25 to about 100 parts of said elastomeric material per 100 parts of thermoplastic material.